

Total Maximum Daily Load Development in the Lynchburg Watershed

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Presentation Overview

- *E. coli* Water Quality Standards
- Lynchburg watershed: data overview
- ABCs of TMDLs
- What happens when the TMDL is complete?

Water Quality Standards

- Regulations based on Federal and State law that set limits on pollutants
- Purpose of Standards is the protection of 6 designated uses:
 - Primary Contact Recreation (swimming)
 - Aquatic Life
 - Fishing
 - Shellfishing
 - Drinking Water
 - Wildlife

***E. coli* Criteria**

Indicator	Instantaneous maximum	Geometric mean
<i>E. coli</i>	235 cfu/100mL	126 cfu/100mL

Blackwater Creek @ Rivermont:

Violation Rate for 2004 assessment:
63% (10/16)

Violation Rate for period of record:
59% (32/54)



Ivy Creek @ Langhorne Rd.:

Violation Rate for 2004 assessment:

16% (3/19)

Violation Rate for period of record:

36% (22/61)



Fishing Creek @ Winchester Rd.:

Violation Rate for 2004 assessment:
32% (8/25)

Violation Rate for period of record:
50% (33/56)



James River @ Rte. 29:

Violation Rate for 2004 assessment:
31% (15/49)

Violation Rate for period of record:
39% (150/382)



Judith Creek @ Trents Ferry Rd.:
Violation Rate for period of record:
11% (2/18)



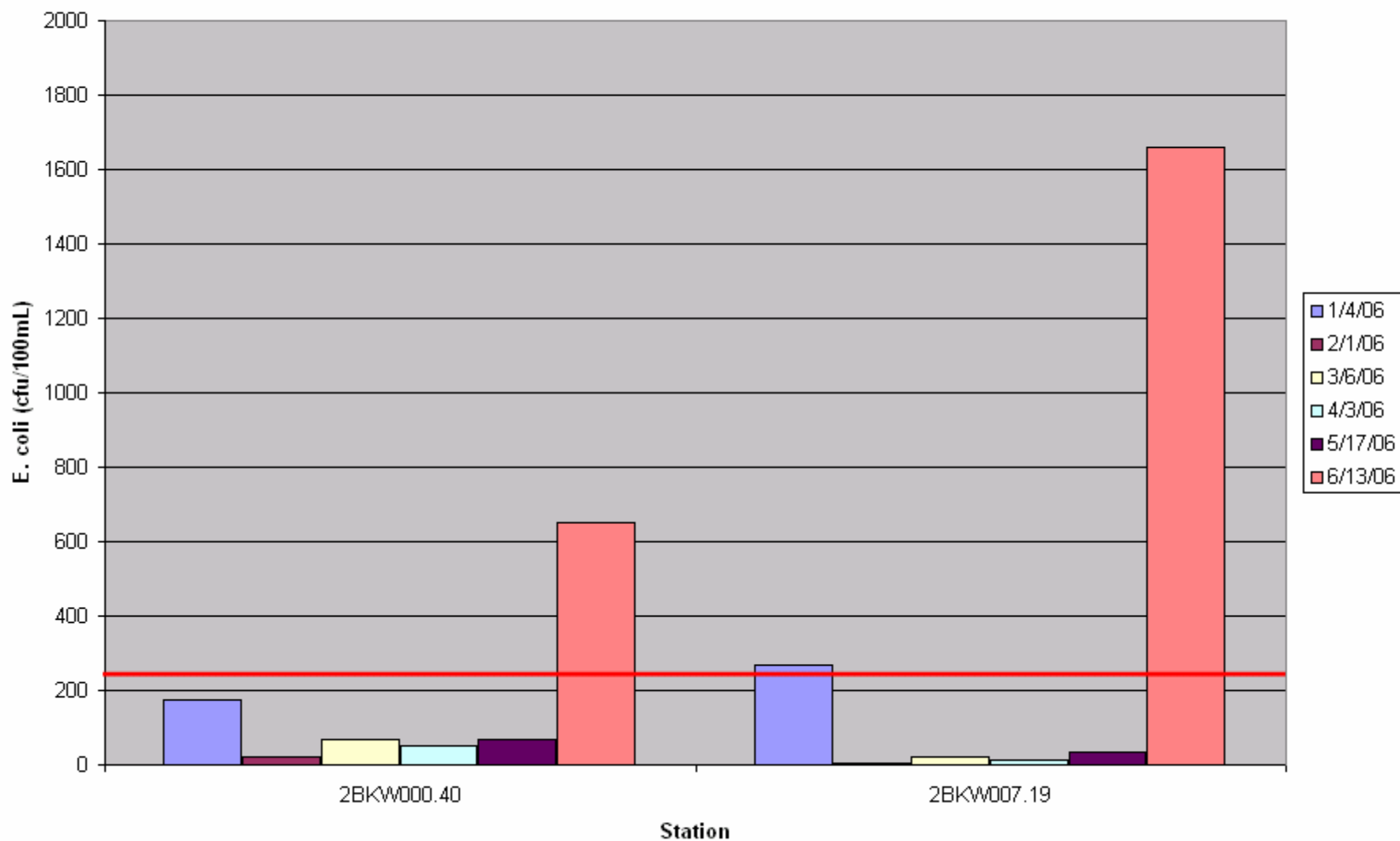
Burton Creek off Fort Ave.:
Violation Rate for period of
record:
20% (3/15)



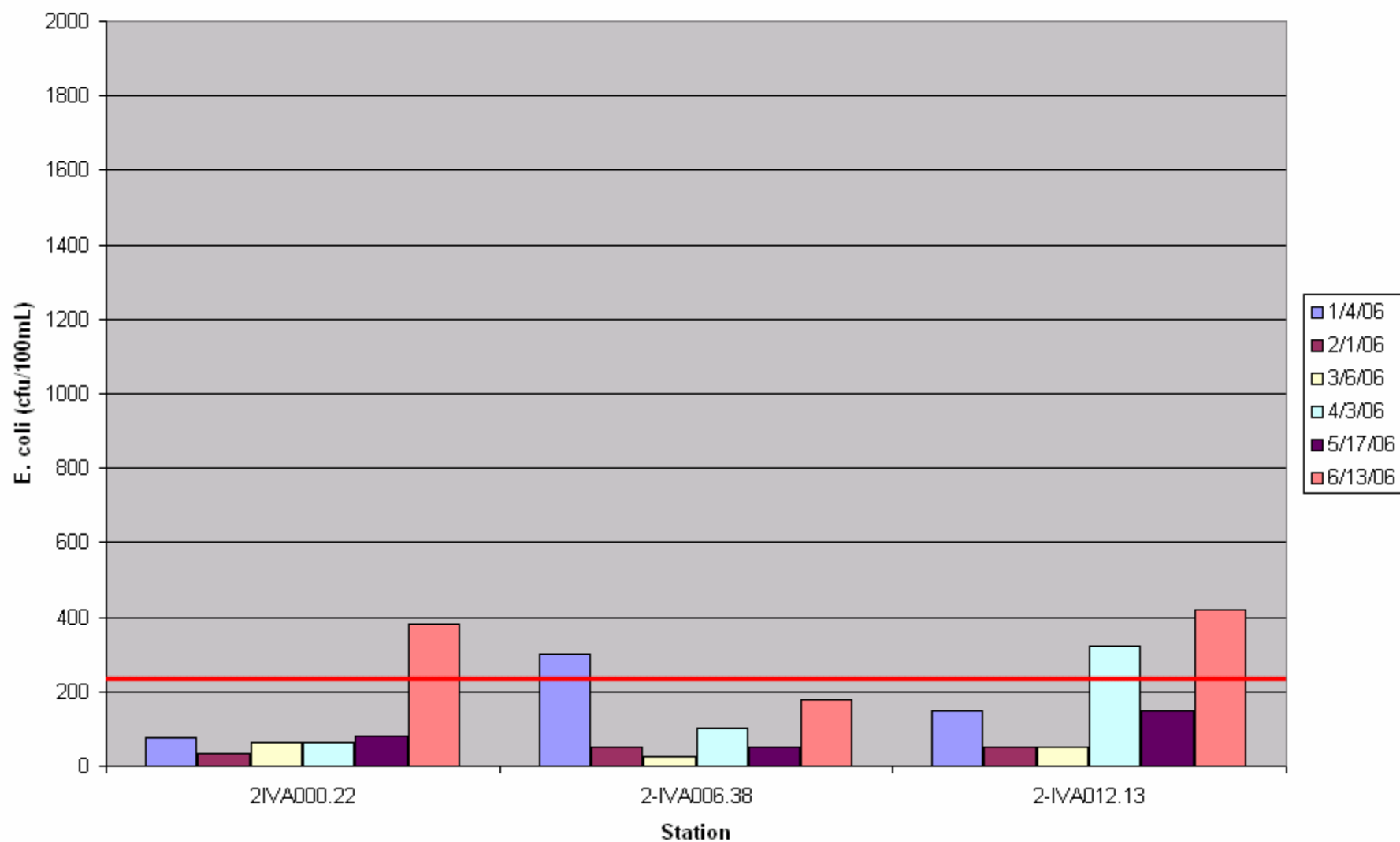
Tomahawk Creek @ McConneville Rd.:
Violation Rate for period of record:
25% (3/12)



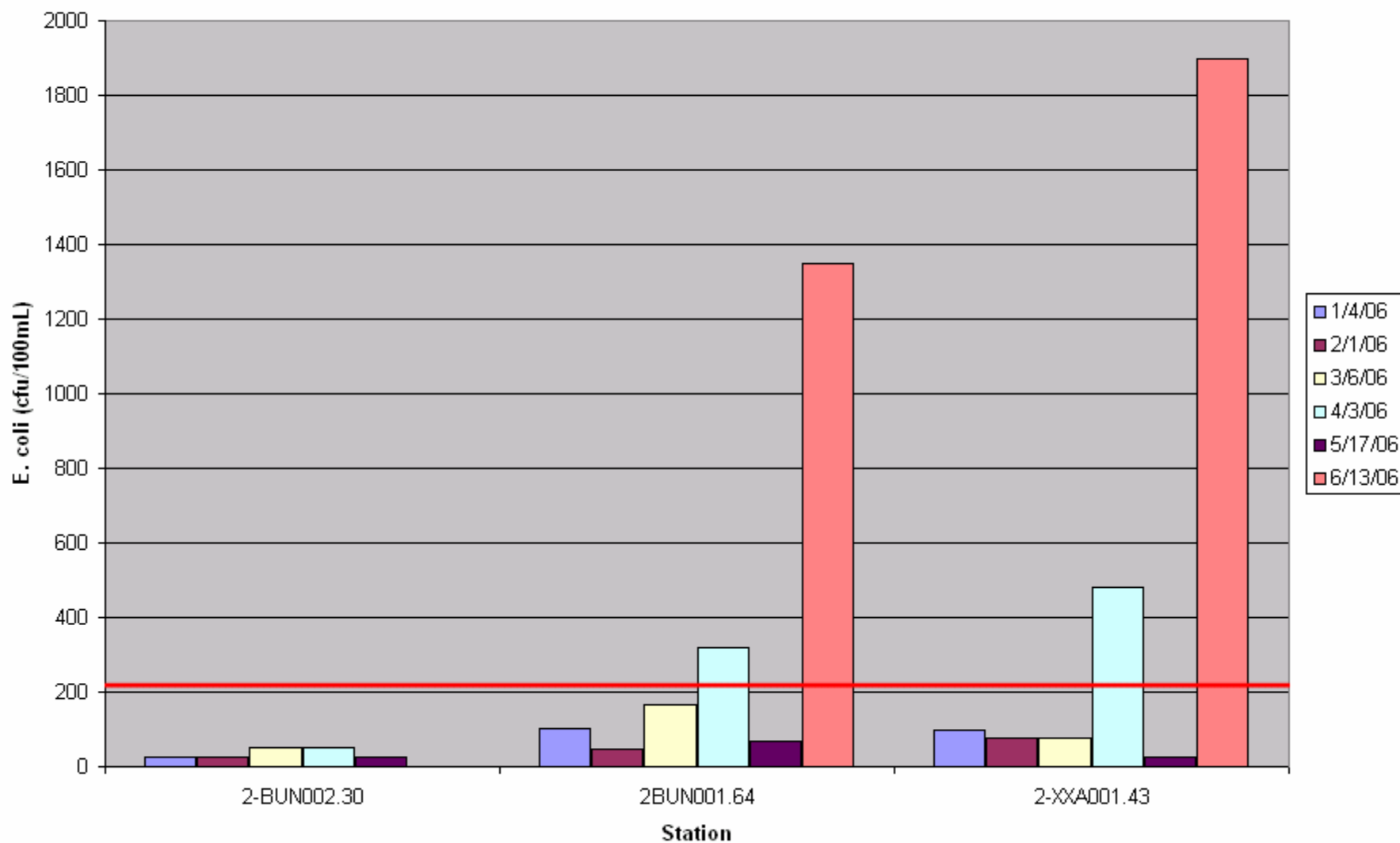
Blackwater Creek 2006 E. coli data



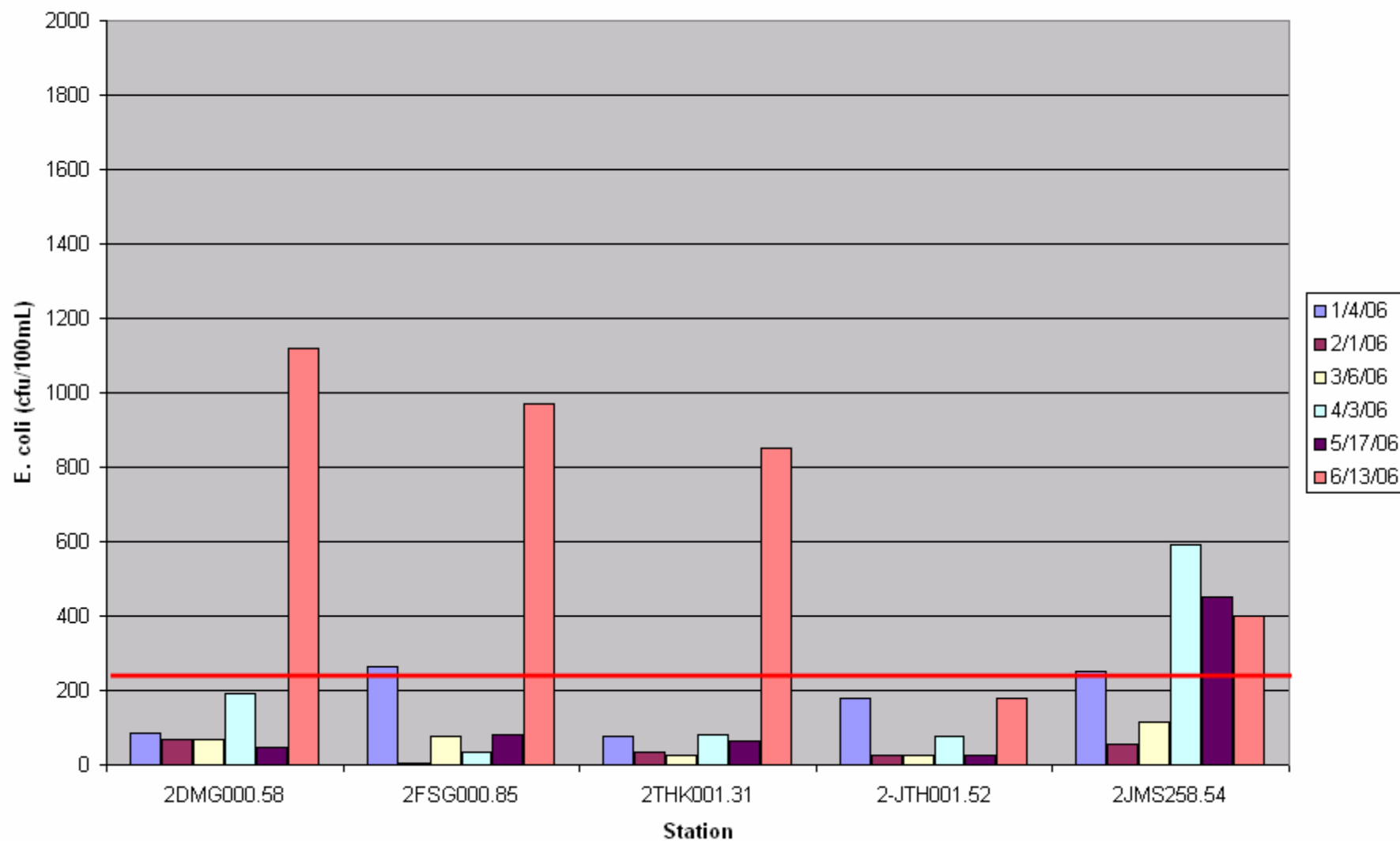
Ivy Creek 2006 E. coli data



Burton Creek 2006 E. coli data



Lynchburg area 2006 E. coli data



What is a TMDL?

- Amount of pollution a stream can receive and still meet Water Quality Standards
- A TMDL study identifies all sources of pollution
 - **Point source pollution** is discharged from a discrete location such as a pipe, tank, pit, or ditch
 - **Non-point source pollution** originates from diffuse areas (land surface or atmosphere) having no well-defined source
- Calculate the amount of *E. coli* entering the stream from each source, then determine the reductions needed from each source to meet water quality standards

TMDL Study Process

- Gather information

- **Technical Advisory Committee (TAC) meetings to review available data and proposed modeling approach**

- First Public Meeting to inform public Final public meeting to present TMDL

- Final revisions and submittal

TMDL- 3 Part Process:

- | TMDL development
- | Implementation Plan development
- | Implement the plan



Steps after EPA Approval of TMDL

| Local staff can address TMDL through:

- Incorporate water quality issues when planning
 - Comprehensive plans, ordinances, zoning****
- Target implementation of BMPs through existing programs**
- Identify and seek grant funding opportunities**
- Initiate public outreach activities**
- Show interest to agencies**
- Continue stream monitoring: DEQ, citizen**

Contact Information

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**TMDL information available on the web at
www.deq.virginia.gov/tmdl**